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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TREMBLAY, MARK STEPHEN

ART UNIT	PAPER NUMBER
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2876

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Re

Office Action Summary

Application No.

09/536,620

Applicant(s)

ITATANI ET AL.

Examiner

Mark Tremblay

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-16 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 5-9 and 17-20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Applicant: Itatani et al.

Filing date: 3/28/00

Claim Objections

5 Claims 5-9 and 17-20 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from a multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 5-9 and 17-20 have not been further treated on the merits.

Claim Rejections - 35 USC § 103

10 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

15 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20 This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

25 Claims 1, 10-12, and 21-23 are rejected under 35 U.S.C. § 103 as being unpatentable over Patent Abstracts of Japan Publication #08-094,886 to Masayuki ("Masayuki" hereinafter) in view of U.S. Patent #5,859,947 to Kiruscheva et al. ("Kiruscheva" hereinafter). Masayuki teaches an optical apparatus having an adjustment apparatus and an optical unit comprising a plurality of
30 optical elements (optical fiber and semiconductor laser), said adjustment apparatus sequentially providing control signals that, according to a probabilistic search technique (although

Masayuki doesn't use the word probabilistic, it is clear from the phrases "efficiently *search* peaks with *high reliability*" and "a *predicted* beam radius" and "approximated to a *gaussian* beam" all clearly indicate that a probabilistic search is being performed), change parameters ('the position is corrected) of a stipulated optical element among said optical elements to become parameters that cause functions of said optical apparatus to satisfy stipulated specifications. Masayuki does not clearly and plainly teach the movement of a plurality of optical elements. Kiryuscheva teaches the adjustment of an optical fiber with a receiver or transmitted, as clearly contemplated by Masayuki, and further teaches that both the lens and the fiber are adjusted to achieve alignment. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the algorithm taught by Masayuki to adjust a plurality of optical elements by adjusting both the lens and the fiber taught by Masayuki because Kiryuscheva teaches that it is likely that both will be out of alignment at the start of the alignment process.

Re claim 10, 21, Official Notice is taken that computers and recording media that computers can read are old and well known in the art. See In Re Malcolm 1942 C.D.589:543 O.G. 440. It is pretty clear that Masayuki is not contemplating adjustments by hand. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a known computer to effect the algorithm described by Masayuki, because while the method could be performed by hand, the calculations, measurements, and adjustments would be excessively tedious, and a computer would save such manual labor.


Claims 2-4, 13-16 are rejected under 35 U.S.C. § 103 as being unpatentable over Masayuki in view of Kiryuscheva, and further in view of U.S. Patent #5,790,283 to Catanzaro et al. ("Catanzaro" hereinafter). Masayuki in view of Kiryuscheva teach the features of the invention, but fail to teach other possible search algorithms. Catanzaro teaches that in the field of optical optimization, simulated annealing and genetic algorithms are known equivalents of other methods. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to substitute the simulated annealing and genetic search algorithms for that taught by Masayuki, because such algorithms are taught by Catanzaro to be useful for optimization of a many-element perturbation optical system.

Voice

Inquiries for the Examiner should be directed to Mark Tremblay at (703) 305-5176. The Examiner's regular office hours are 10:30 am to 7:00 pm EST Monday to Friday. Voice mail is available. If Applicant has trouble contacting the Examiner, the Supervisory Patent Examiner, Michael Lee, can be reached on (703) 305-3503. Technical questions and comments concerning PTO procedures may be directed to the Patent Assistance Center hotline at 1-800-786-9199 or (703) 308-4357.

Fax Procedures

Application papers may faxed to Art Unit 2876 at (703)872-9306. Faxes must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). Papers solely for the examiner's consideration, and not intended for immediate entry into the application (e.g., a proposed amendment) should be unsigned and clearly marked "Draft Copy" and faxed to (703) 746-5577.


MARK TREMBLAY
PRIMARY EXAMINER

October 3, 2003